

IN THE CLAIMS:

1. (Currently amended) ~~In a~~ A method for producing a film, ~~by casting a preformed solution, the improvement comprising:~~

providing a substrate, wherein said substrate is selected from the group consisting of (i) a substrate comprising pre-sintered ceramic oxide and (ii) tape that includes at least one binder and at least one plasticizer; and

casting the a preformed solution onto said substrate using an atomizer, wherein said preformed solution comprises a ceramic powder.

2. (Currently amended) ~~The improvement of Claim~~ method of claim 1, wherein ~~using an~~ said atomizer spreads ~~the~~ said preformed solution in a fine mist.

3. (Currently amended) ~~The improvement of Claim~~ method of claim 1, wherein the step of casting ~~with the atomizer~~ is carried out at room temperature.

4. (Currently amended) ~~The improvement of Claim~~ method of claim 1, wherein ~~the casting of the preformed solution is carried out by spraying the preformed solution with the atomizer on a heated~~ said substrate is heated.

5. (Currently amended) The ~~improvement of Claim~~ method of claim 4, additionally including heating the wherein said substrate is heated by direct heating or by blowing hot air there across.

6. (Currently amended) The ~~improvement of Claim~~ method of claim 1, additionally including forming the said preformed solution.

7. (Currently amended) The ~~improvement of Claim~~ method of claim 6, wherein the step of forming the said preformed solution is carried out so as to include a solvent and dispersant for preventing agglomeration.

8. (Currently amended) The ~~improvement of Claim~~ method of claim 7, wherein the step of forming the said preformed solution is carried out such that said solvent has a high volatility and ~~the~~ said solution has a low viscosity.

9. (Currently amended) The ~~improvement of Claim~~ method of claim 7, wherein ~~the~~ said solvent is organic.

10. (Currently amended) The ~~improvement of Claim~~ method of claim 7, wherein ~~the said solvent is composed of~~ comprises material selected from the group consisting of ethanol, and methanol ~~and alcohol~~.

11. (Currently amended) The ~~improvement of Claim~~ method of claim 6, wherein the step of forming the said preformed solution is carried out by:

dispersing said powder ~~to be coated~~ in a solvent; ;

adding a dispersant to prevent agglomeration; and

adding at least one of the group consisting of ~~plasticizers and binders~~ a plasticizer and a binder.

12. (Currently amended) The ~~improvement of Claim~~ method of claim 11, wherein ~~the said solvent of thus formed solution~~ said preformed solution has a high volatility and said preformed solution has a low viscosity.

13. (Currently amended) The ~~improvement of Claim~~ method of claim 12, wherein said solvent is organic or a mixture of organic and water.

14. (Currently amended) The ~~improvement of Claim~~ method of claim 12, wherein said solvent is selected from the group consisting of ethanol, and methanol and alcohol.

15. (Currently amended) The ~~improvement of Claim~~ method of claim 12, wherein the step of casting the said preformed solution is carried out by ~~the said~~ atomizer at a temperature below about 100° C.

16. (Currently amended) The ~~improvement of Claim~~ method of claim 15, wherein the step of casting of the preformed solution is carried out by the said atomizer by spraying a mist of the said preformed solution onto a ~~heated~~ said substrate, wherein said substrate is heated.

17. (Currently amended) An aerosol spray casting method, comprising ~~preparing a solution by:~~

preparing a solution by dispersing a ceramic powder to be coated in a solvent;

adding to the said solution a dispersant to prevent agglomeration; and ;

adding at least one of the plasticizers and binders as needed to the plasticizer and binder to said solution; and;

depositing the said solution onto a substrate to be coated using an atomizer, wherein said substrate comprises material selected from the group consisting of (i) pre-sintered ceramic oxide and (ii) tape that includes at least one binder and at least one plasticizer.

18. (Currently amended) The method of ~~Claim~~ claim 17, wherein the said solvent is selected from the group consisting of ethanol and methanol.

19. (Currently amended) The method of ~~Claim~~ claim 17, wherein the step of depositing the said solution is carried out at a temperature below about 100° C.

20. (Currently amended) The method of ~~Claim~~ claim 17, wherein the step of depositing ~~the~~ said solution is carried out by spraying via ~~the~~ said atomizer on a ~~heated~~ said substrate, wherein said substrate is heated.